

Towards a Conversational User Interface for Aiding Researchers with Reproducibility

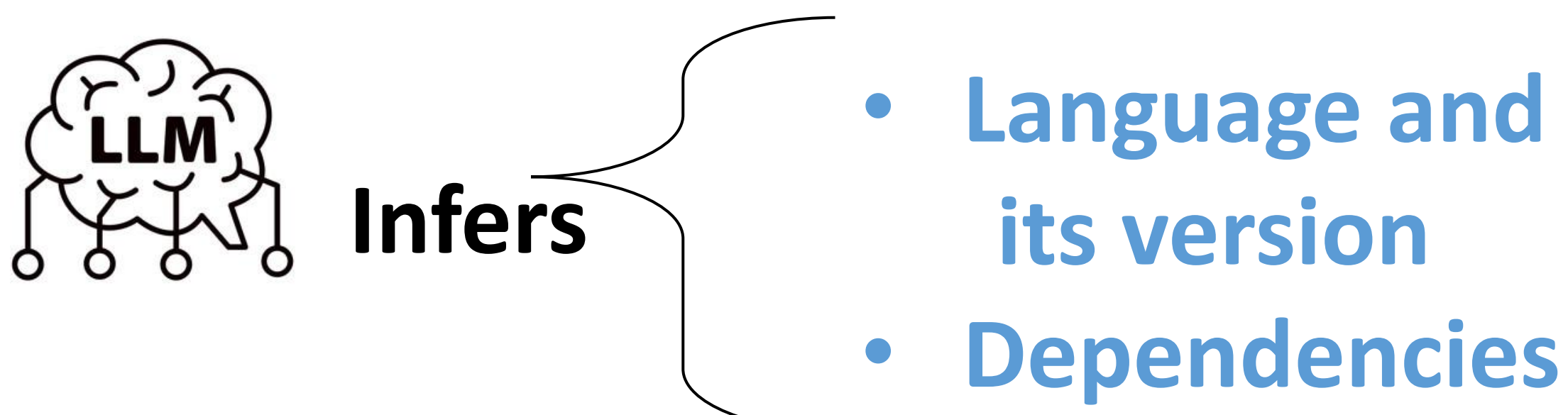
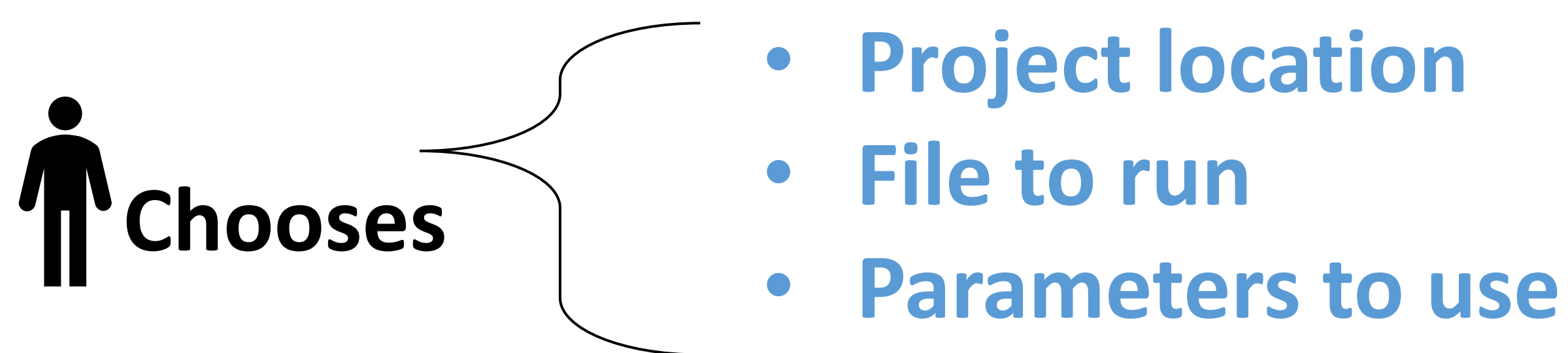
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Goals

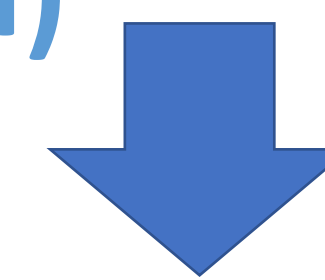
- Use an LLM to guide the researcher to create a research artifact
- Reduce the time spent
- Reduce the number of interactions required to create a research artifact

LLM integration



Computational environments

- Uses the Dockerfile to create a docker image
- Builds a research artifact of the experiment with all the information(environment, code, data, configurations to run)



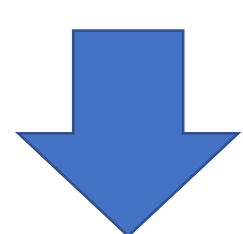
Easily shareable Zip file

User-friendly Interface

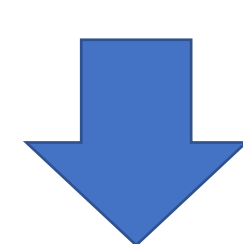
- Conversational interface with pre-defined questions for the user
- Feed of interactions between the researcher and LLM
- Shows the experiment result to the researcher
- Allows the researcher to change the inferred information in case of failure

Code Execution

- Uses the docker image created
- Uses the dataset
- Uses the needed scripts



Execute always in the same way



Get the same results

Source

The project source code can be accessed on this QC.



```
assistant *
Please insert the root folder of the project

researcher
my Project

researcher *
Here is a list of files in the project. Please provide a categorized list of Executable and Script Files and Configuration Files.
Format your response as follows: {"ExecutableFiles": [List of files], "ConfigurationFiles": [List of files]} and in the Correct JSON String
format.
For example: {"ExecutableFiles": ["file1.exe", "file2.py", "file3.sh"], "ConfigurationFiles": ["config.yaml"]}
Here are the files to categorize:

assistant *
• ExecutableFiles:
  functions.py
  main.py
• ConfigurationFiles:

assistant *
Please insert the name of the file to run.

researcher
main.py

assistant *
Tell me how to execute the file. For example: Python ./myExampleFile.py

researcher
python ./main.py
```

* Message generated by Platform

* Message generated by LLM

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